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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/975,797 | 10/11/2001 | Michael L. Walker | 194-15337CIP | 9540 |
| 24923 | 7590 | 12/29/2004 | | |
| PAUL S MADAN MADAN, MOSSMAN & SRIRAM, PC 2603 AUGUSTA, SUITE 700 HOUSTON, TX 77057-1130 | | | EXAMINER TUCKER, PHILIP C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1712 | |

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,797

Applicant(s)

WALKER, MICHAEL L.

Examiner

Philip C Tucker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,10-13,15-17 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,10 and 11 is/are allowed.
- 6) ☒ Claim(s) 12,13,15 and 22 is/are rejected.
- 7) ☒ Claim(s) 16, 17, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/18/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson (5846450).

Atkinson teaches a brine which comprises formates, such as potassium formate, and can further comprise water, ammonia and corrosion inhibitors, such as triazoles (see claims 4-8). The levels as high as 70% potassium formate would result in brines within the density level of greater than 11 lbs/gal. Atkinson teaches that a combination of water and ammonia may be used as a solvent (claim 5). Atkinson differs from the present invention in that a combination of water and ammonia as a solvent is not disclosed in an example, and a specific example of using a triazole is not disclosed. However, it would be obvious to one of ordinary skill in the art to vary the amount of water and ammonia as a combination solvent, including within the concentration ranges of the present invention, in the invention of Atkinson, given the teaching of Atkinson that such combinations may be used to provide specific refrigerant vapor (column 3, lines 42-47). The use of triazoles as corrosion inhibitors in the brine of Atkinson, would be obvious to one of ordinary skill in the art, given the teaching of Atkinson that such

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triazoles are useful for corrosion inhibition in the brine (column 3, lines 48-52). Such triazoles would be encompassed by the teaching of azoles by the claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Doty (4728446).

Doty teaches a corrosion inhibited brine comprising an alkali metal or alkaline earth metal salt, and a corrosion inhibitor of ammonium thiocyanate (salt of ammonia), at levels of 0.05 to 1.5% which overlap the concentrations of the present invention (see Table IV and claims 1-3. Such thiocyanate would inherently absorb acid as in the present invention.

2. Claim 12 isare rejected under 35 U.S.C. 102(b) as being anticipated by WO 86/04634.

WO '634 teaches a corrosion inhibited brine which comprises zinc and calcium ions and corrosion inhibiting ammonium salts within the concentration of the present invention (see for example Tables I and II and related text on pages 14-15). Such ammonium salts would inherently absorb acid as in the present invention.

3. Claims 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Shin (4784778).

Shin teaches a corrosion inhibited brine comprising zinc and calcium ions and an ammonium thioglycolate salt within the concentration range of the present invention, which can further comprise a hydroxycarboxylic acid (see claim 9 and example VI). Such ammonium salt would inherently absorb acid as in the present invention.

4. Claims 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Dadgar (4784779).

Dadgar teaches a corrosion inhibited brine comprising zinc, sodium and calcium ions and an ammonium thioglycolate or thiocyanate salt within the concentration range of the present invention, which can further comprise a hydroxycarboxylic acid (see examples III, IV and VII and claim 1). Such ammonium salt would inherently absorb acid as in the present invention.

4. Claims 16, 17, 23 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 1, 3-5, 10 and 11 are allowable over the art of record.

6. Applicant amendment and arguments are deemed partially persuasive. Applicant did not remove ammonium salts from the scope of claim 12, and the rejections are thus maintained. Applicant's removal of the method involving removing acid again renders claim 13 rejectable by Atkinson.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Tucker whose telephone number is 571-272-1095. The examiner can normally be reached on Monday - Friday, Flexible schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip C Tucker
Primary Examiner
Art Unit 1712

PCT-3032